

Date: Sun, 12 Dec 93 04:30:28 PST
From: Ham-Digital Mailing List and Newsgroup <ham-digital@ucsd.edu>
Errors-To: Ham-Digital-Errors@UCSD.Edu
Reply-To: Ham-Digital@UCSD.Edu
Precedence: Bulk
Subject: Ham-Digital Digest V93 #144
To: Ham-Digital

Ham-Digital Digest Sun, 12 Dec 93 Volume 93 : Issue 144

Today's Topics:

 9k6 baud packet - is there any point?
 COMPLETE Documented NOS Wanted
 Modifying the 16550 chips on the RS-232 cards
 Need advice on using tube-final rigs for RTTY/AFSK
 Q: G3RUH 9600 and Kenwood TM721

Send Replies or notes for publication to: <Ham-Digital@UCSD.Edu>
Send subscription requests to: <Ham-Digital-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Digital Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-digital".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Thu, 9 Dec 1993 07:15:38 +0000
From: pacbell.com!sgiblab!swrinde!cs.utexas.edu!howland.reston.ans.net!pipex!
uknet!demon!llondel.demon.co.uk!dave@network.ucsd.edu
Subject: 9K6 baud packet - is there any point?
To: ham-digital@ucsd.edu

In article <FROUD.93Dec8202731@sunlab41.sx.ac.uk> froud@sunlab41.sx.ac.uk (How
much wood could a woodchuck chuck if a woodchuck could chuck wood?) writes:

>Just a minor point I wouldn't mind cleared up if anyone has a few seconds...
>

>I read that rigs had to be modified to allow upwards of 2k4 baud transmission,
>but is this pointless if the person you are trying to communicate with
>hasn't a repicrocal modification at the either end to allow reception of
>higher baud transmissions?

>

Unlike land-line modems, there is no speed negotiation on packet (unless you
are using strange kit) so you have to set up your rig/TNC to work at a
particular speed. Once you have tried 9600baud you will think that 1200 is

very slow. It isn't hard to modify rigs either....

Dave

--

```
*****
* G4WRW @ GB7WRW.#41.GBR.EU AX25      * Start at the beginning. Go on *
* dave@llondel.demon.co.uk Internet * until the end. Then stop. *
* g4w1w@g4w1w.ampr.org Amprnet * (the king to the white rabbit) *
*****
```

Date: 10 Dec 1993 12:41:00 GMT
From: ucsnews!sol.ctr.columbia.edu!howland.reston.ans.net!pipex!uknet!warwick!
unicorn.nott.ac.uk!unicorn.nott.ac.uk!eeyimkn@network.ucsd.edu
Subject: COMPLETE Documented NOS Wanted
To: ham-digital@ucsd.edu

Hi folks,

You might like to know that I'm currently working on a (relatively brief) guide to getting up and running with NOS, provisionally entitled 'NOS for Dummies'. This may change :-)

It won't cover nearly as much in depth as Ian's book, but should be able to help with the basics of starting up. It'll be freely available as TeX source or Postscript. I started it earlier this year as a mini-project, but it's grown out of all proportion, so I'll probably finish it some time next spring, depending on whether I include the stuff about running IP through Linux or not, and on how long it takes for me to finish porting the existing text from Micro\$oft Word to TeX..

73 Mike G7GPA

--

+ - Mike Knell, University of Nottingham, UK - = - M.Knell@unicorn.nott.ac.uk - - +
| --THIS SPACE TEMPORARILY BLANK-- | AMPR: g7gpa@hobbes.g7gpa.ampr.org |
| (until I can think of a decent joke) | AX25: g7gpa@g7gpa.gb7bad.#23.gbr.eu |
| UNDER the overpass! OVER the underpass! Around the future and BEYOND REPAIR! |

Date: Thu, 9 Dec 1993 19:18:51 GMT
From: das.wang.com!wang!garyf@uunet.uu.net
Subject: Modifying the 16550 chips on the RS-232 cards
To: ham-digital@ucsd.edu

postmaster@asarin.ORG.AR writes:

>FIFO in the 16550A is operative all the time; the software issued some time ago merely sets different TRIGGER levels for the UART's "data available" flag.

It looks like you did a lot of work on this, but I think you got carried away with a hardware fix for a software problem.

Gary

--

--/* Gary A. Field - WA1GRC, Wang Labs M/S 019-72B, 1 Industrial Ave
Lowell, MA 01851-5161, (508) 967-2514, email: garyf@wiis.wang.com, EST5EDT
A waist is a terrible thing to mind! */

Date: Wed, 8 Dec 1993 14:19:15 GMT

From: olivea!sgigate.sgi.com!sgiblab!swrinde!emory!kd4nc!ke4zv!gary@decwrl.dec.com

Subject: Need advice on using tube-final rigs for RTTY/AFSK

To: ham-digital@ucsd.edu

In article <2e1o5h\$77@klaava.Helsinki.FI> stickler@klaava.Helsinki.FI (Patric M Stickler) writes:

>I'll be shopping for a used rig soon and will be on a very tight
>budget, so I'm trying to get a picture of what the minimal rig would be
>that will do what I want. Other than SSB/CW, I've been itching to get
>into RTTY, but have heard that many older rigs have problems both from
>the 100% duty cycle and sluggish operation.

>

>I'm intrested in hearing people's experiences working the various
>digital modes on HF using older tube rigs, or rigs with tube finals.
>More than likely, I'll be using a late-model multimode TNC and AFSK for
>HF RTTY/Baudot/AMTOR. What sort of things should I look for in a
>suitable rig. Obviously, the quality of the SSB signal is more
>important when using AFSK rather than FSK (right?). How can one
>estimate the max. drive the finals can take at 100% duty cycle? How
>can one determine if the tx is "fast" enough (or is sluggishness
>only a problem with FSK and not AFSK?).

Ok, I use two different rigs for the HF digital modes. I use the IC735 and a B&W6100 and Drake R4C. The former is, of course, a modern solid state transceiver. It performs well on all the digital modes. It has IF shift that allows the narrow filter to be positioned correctly for the digital tones even in SSB mode. It will allow either AFSK or FSK transmission. FSK is generally preferred. It switches quickly enough for AMTOR. For RTTY, drive should be reduced to 50 watts output. For AMTOR and packet, full power is OK since it has an excellent thermal design.

The B&W6100 uses a pair of 6146Bs in the final and is rated at 180 watts PEP in SSB mode. It too needs to be throttled back to 50 watts for RTTY, and can handle about 120 watts AMTOR or packet. When I used the Drake T4X, it was necessary to throttle back the sweep tube finals to about 20 watts for RTTY because their dissipation is insufficient for higher power steady carrier use. In general, use the manufacturer's recommendation for AM voice power level for RTTY. If you don't have the manual, divide normal *average* SSB power levels by 2 for real transmitting tubes, and by 4 for sweep tubes. Average power under SSB is very difficult to characterize because it's fundamentally tied to voice characteristics. A good rule of thumb is that it's 20% of the *input* PEP rating. AMTOR and packet, because they transmit intermittantly, can use somewhat higher power levels.

Radios that use open frame TR relays can be a problem for AMTOR, but not always. Often it is the AF stage recovery time that dominates the TR turnaround. Open frame relays can be fast enough, and vacuum relays always are fast enough. In rigs that switch the B+ to the receiver, you may need to change the value of power supply decoupling capacitors in order to get a short enough time constant for receiver recovery. Or, you can modify the TR switching so that B+ stays hot and mute the receiver another way. That's the method I normally use.

Don't be concerned about the apparent low power levels on RTTY. It doesn't take a lot of power to get good print at intercontinental distances providing the other station has a good TU, not a PK232 or KAM. Something like an ST-6 does wonders for digging out signals that are below the noise to the ear. The PK232 will allow you to put an external modem ahead of it, so using a ST-6 with it is an option. I don't think the KAM will support that without modifications. And of course for RTTY all you need is the ST-6 and a modem program that supports Baudot running on your computer, or an honest to God old mechanical teletype. The ST-6 will also work with some of the packet programs that do the bit banging in software. I don't know of any software only AMTOR programs so you're stuck with using the PK-232 as the protocol engine in that case. Some of the newer DSP boxes may be as good, or better, than the ST-6, but I haven't done a side by side test yet.

Gary

--

Gary Coffman KE4ZV	I kill you,	gatech!wa4mei!ke4zv!gary
Destructive Testing Systems	You kill me,	uunet!rsiatl!ke4zv!gary
534 Shannon Way	We're the Manson Family	emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244	-sorry Barney	

Date: 8 Dec 93 11:30:53 GMT
From: metro!basser.cs.su.oz.au!harbinger.cc.monash.edu.au!yeshua.marcam.com!
news.kei.com!ddsw1!library.ucla.edu!news.mic.ucla.edu!ctc.com!pitt.edu!gatech!
howland.reston.ans.@munniari.oz.au
Subject: Q: G3RUH 9600 and Kenwood TM721
To: ham-digital@ucsd.edu

I am looking for info about connecting 9600 modem type G3RUH to a Kenwood TM721A.

Thanks in advance,

4X1BQ, Yossi Sharon

Internet: yosi@eng.tau.ac.il
Packet: 4X1BQ@4X1RU.isr.mdle

Date: 11 Dec 1993 01:29:21 -0800
From: ukma!nntp.msstate.edu!olivea!apple.com!apple.com!not-for-mail@seismo.css.gov
To: ham-digital@ucsd.edu

References <1993Dec6.174733.27968@mixcom.mixcom.com>, <2e3vpa\$dg9@spock.usc.edu>,
<jschulma.21.000F2EAC@uiuc.edu>du
Subject : Re: When will we get digital cellular?

In article <jschulma.21.000F2EAC@uiuc.edu>,
Jay S. Schulman <jschulma@uiuc.edu> wrote:
>Speaking as someone who has been testing digital for a few months for
>Motorolla, it is not what it is cracked up to be. Don't get me wrong, in a
>few years digital cellular will be what analog is today. But, right now,
>digital sounds terrible! It sounds like you are talking into a cheap computer
>and listening to the playback. Besides heavy hissing and other background
>noise, your voice alone makes it difficult for others to understand you.

Sounds like TDMA cellular is really awful at this point! I tried a
CDMA phone during a test one day and the audio quality was just fine--
even with 50 or 60 other people using the same channel at the same time.

>To anyone considering digital:
>
> Wait. It will get much better in the future.

I guess how far in the future you'll have to wait for decent
quality depends on which type of digital cellular is being
installed in your area. :-)

Patty

--

```
===== Patty Winter =====  
Apple contractor           Internet: winter@apple.com  
Sunnyvale, California      AMPRNet: 44.4.4.50  
  "What about truth? What about reality?"  
  "What about the way the old ending tested in Canoga Park?"  
===== N6BIS =====
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End of Ham-Digital Digest V93 #144

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